

A Sea of Opportunity

The potential of fishermen to adapt to changing seas is high. They are used to adapting to changeable weather, stocks and regulatory frameworks. Can technology offer exciting possibilities to increase the sustainability of fishing?

Fishing Boats

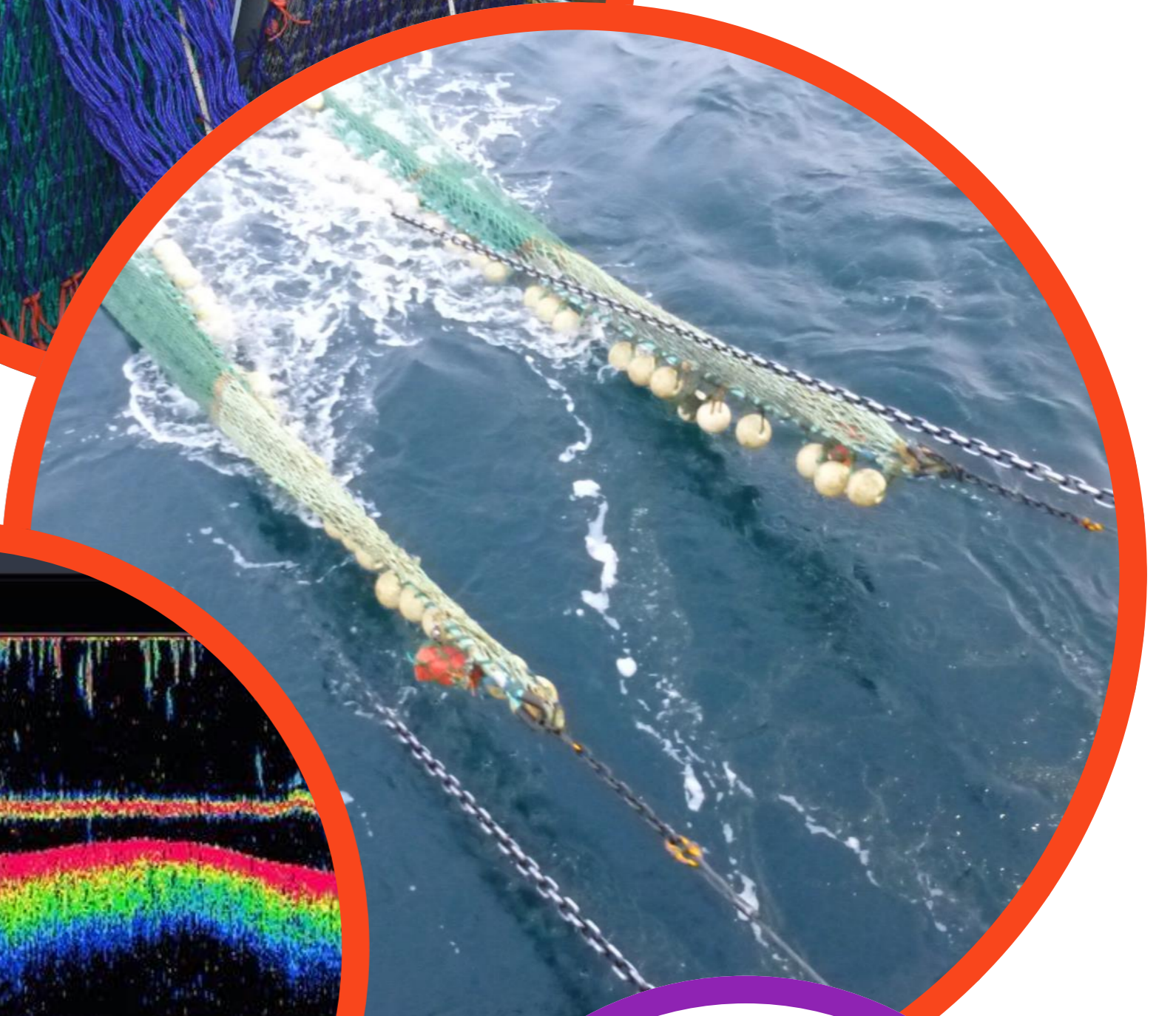
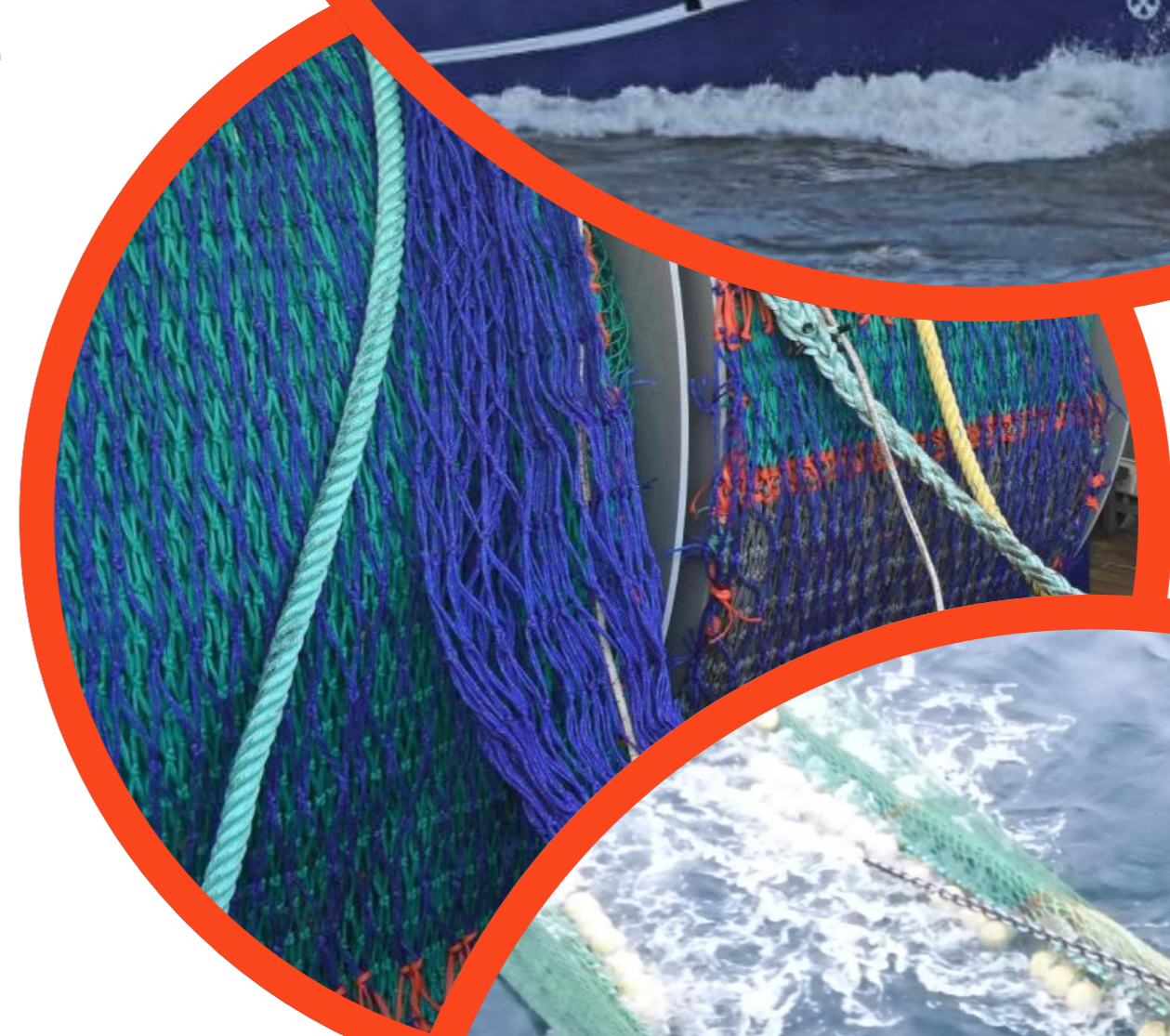
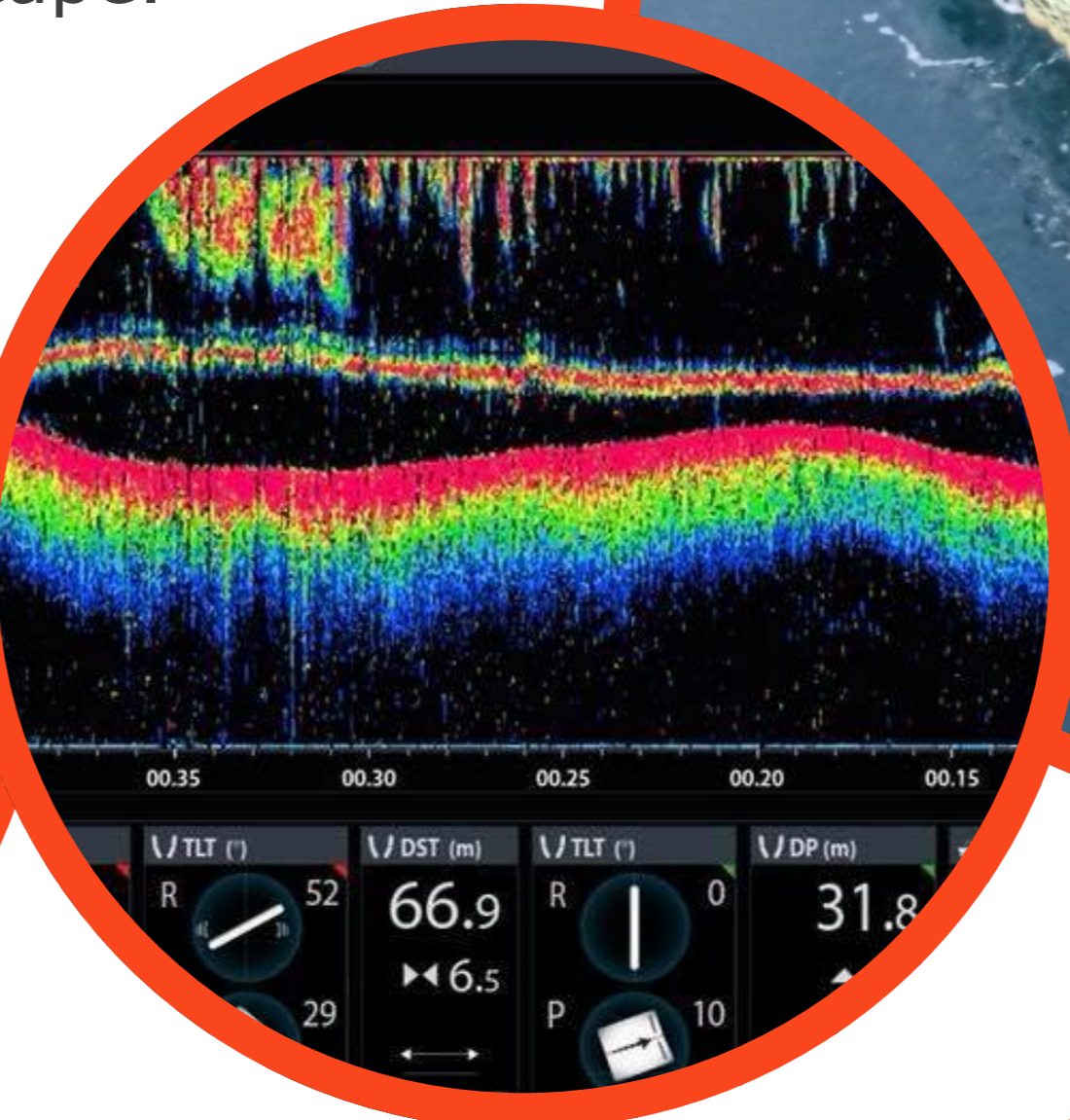
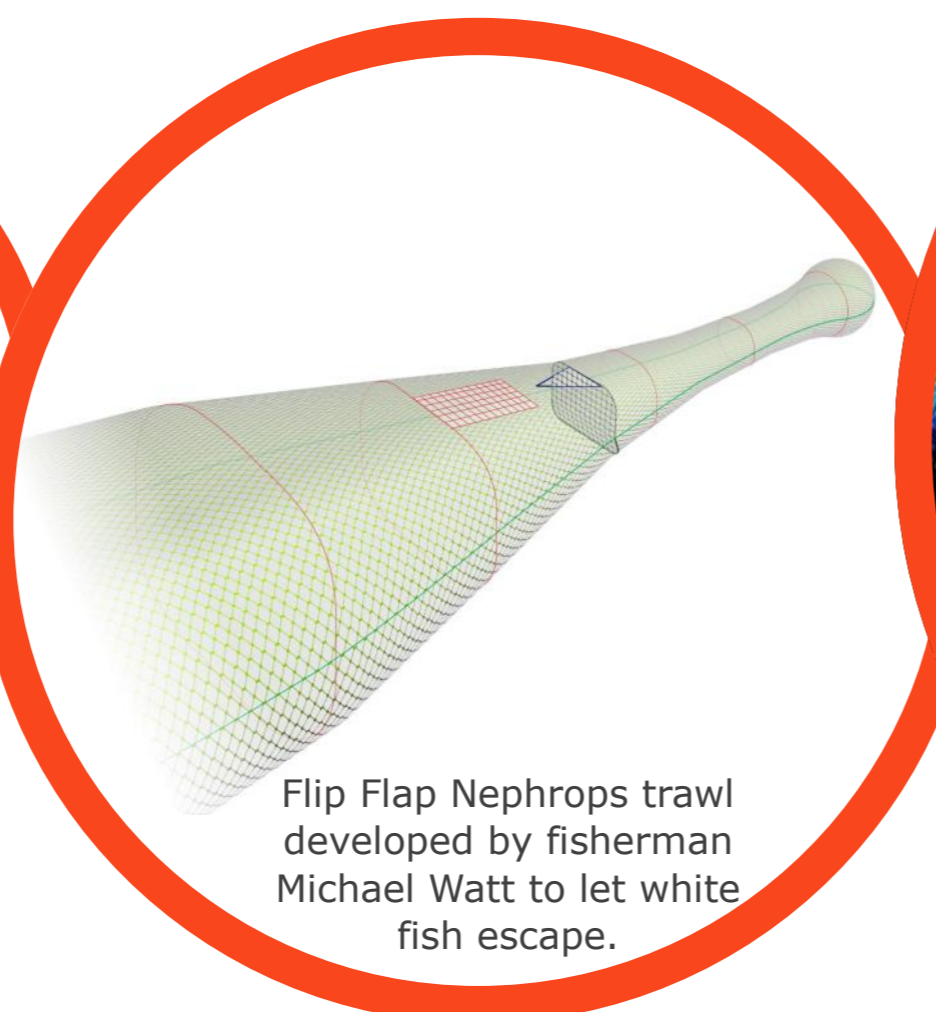
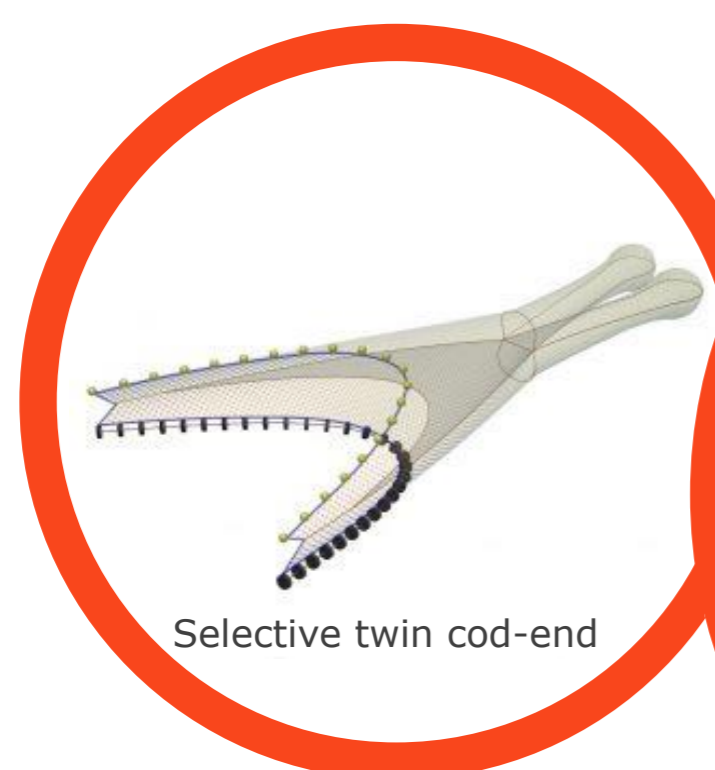
New fishing boats of all scales now employ the latest designs and materials. New hull shapes improve stability. 90% of the fishing industry's carbon footprint comes from fuel so engines can be developed to maximise efficiency or new fuels could be explored.

High grade stainless steel and new coatings can offer rust protection without using harmful chemicals. Satellite technology, AI and robotics have huge potential for monitoring, efficiency, safety and animal welfare.

Fishing Gear

In mixed fisheries, different species of fish are often found together so fishermen and scientists are working closely together to develop new net technology that only removes the target species.

New materials are chosen to cause less abrasion, so minimising pollution from worn or broken nets. Larger mesh sizes, innovative shapes, panels and escape hatches can allow smaller and non-target fish to escape. Sensors can aid accurate positioning of nets.



We are world leaders in terms of Marine Scotland Science working alongside the Scottish fishing industry in fishing gear technology.

Rob Kynoch
Marine Scotland

Fishing methods

By adopting new techniques (e.g. by sampling herring shoals before deciding whether to shoot their nets) fishermen can avoid catching fish that are too small. Techniques which are less destructive and have a lower carbon footprint, such as seining, can replace trawling.

Shellfish can be caught using creels which, being a passive method, retains the catch in good condition. Small crabs and lobsters, and *berried* lobsters (with eggs) are returned to the sea. Around Orkney, fishermen send berried lobsters to a hatchery where the eggs are grown on and released into the wild. Such methods could be increasingly important to support local fisheries to adapt to future changes.



Focusing on sustainability leads to higher quality catches and lower fuel and repair costs so there are strong economic incentives for fishermen to fish responsibly.

